



MDC Resource Science

Mail vs. Email

A Pulse Check on Surveys

Science Notes



2016 Missouri Deer Hunter Opinion Survey

A Survey by the Missouri Department of Conservation

Instructions

- Please fill out this form with your 2016 deer hunting information.
- Please PRINT clearly within the boxes. USE ONLY A PEN WITH BLACK OR BLUE INK.
- Please use the three-digit codes for hunted counties included on the reverse side of the cover letter.
- Please use all three digits, including zeros.
- Report only hunting done with a firearms permit.
- Report only hunting done by you. DO NOT include hunting done by members of your hunting party or family.
- Please reply even if you did not hunt or were not successful.
- Please return the completed survey in the enclosed postage-paid envelope. No postage is required.

Thank You for Helping Manage Deer in Missouri through Your Response!

2016 Missouri Deer Hunter Opinion Survey

Please PRINT clearly within the boxes. USE ONLY A PEN WITH BLACK OR BLUE INK.

1. In which of the following portions of the 2016 Firearms Deer Season did you hunt? (check all that apply)

☐ I did not hunt during the 2016 Deer Season → PLEASE SKIP TO QUESTION 18

☐ Early youth portion (Oct. 29-30)

☐ November portion (Nov. 12-22)

☐ Late youth portion (Nov. 23-27)

☐ Antelope portion (Dec. 2-4)

☐ Alternative Methods portion (Dec. 24-Jan. 3)

2. During the 2016 Firearms Deer Season, you hunted: (check only one box)

☐ Only on public land

☐ Mostly on public land

☐ On public and private land equally

☐ Mostly on private land

☐ Only on private land



Mail vs. Email - A Pulse Check on Surveys

By: Ron Reitz and Tom Treiman

Information Need:

With nearly every survey Resource Science Division conducts, administration, budgeters, and staff ask “Wouldn’t online surveys save MDC money?” and we respond, “It depends!” Online surveys have become attractive as a presumably economical way to measure constituents’ preferences, opinions, and attitudes. However, issues such as non-response bias, sample validity, and sampling error due to internet access differences in the population can have effects on representativeness, reliability, and accuracy. We examined response rates, responses, demographics, and potential sources of bias in the 2016 post-season firearms deer and deer hunter opinion surveys using 1) a mail-back paper survey and 2) an online survey sent to a sample of those with an email address in the point-of-sale (POS) system.

Results:

Deer permit holders with emails tended to be slightly younger and fewer lived in rural areas than those without email addresses (Table 1). Both groups were overwhelmingly male.

Table 1. Permit holder information.

2016 Deer Permit Buyers	No Email	Email
Percent Male	82.7%	83.2%
Percent Rural	80.1%	73.8%
Average Age (years)	43.1	37.2

Response rates varied between 27% for the online firearms survey to 38% for the mail firearms survey (Table 2). Respondents were older, less rural, and more male than non-respondents.

Table 2. Response rates by survey type and mode.

Survey	Mode	Response Rate	Group	Percent Male	Percent Rural	Average Age (yrs)
Firearms	Mail	34.8%	Respondent	87.0%	73.5%	51.7
			Non-respondent	81.9%	79.5%	39.9
	Email	27.0%	Respondent	89.3%	68.6%	44.0
			Non-respondent	83.4%	75.8%	38.6
Opinion	Mail	38.0%	Respondent	84.0%	78.3%	50.9
			Non-respondent	78.6%	83.3%	38.8
	Email	30.5%	Respondent	90.9%	67.5%	44.6
			Non-respondent	81.3%	76.8%	39.3

Online surveys allow a nuanced look at response rates, showing that over half of recipients who opened the email responded (Table 3). Small percentages had “bad” email addresses or opted out.

Table 3. Response rates by survey type.

Survey	Bad Email	Opted Out	Opened Email	Responded to Email
Firearms	1.7%	1.0%	57.7%	27.0%
Opinion	2.1%	1.5%	60.7%	30.5%

Looking at responses to key questions by mail vs. email reveals very few substantive differences. On the firearms survey, both mail and email groups hunted mostly on private land, desired a stable or increasing deer population, and had only small, non-substantive differences in perceptions of deer populations and whether they hunted in 2016. On the opinion survey, the groups showed no difference on where they hunted, perceptions of deer population, and only small, non-substantive differences in perceptions of MDC’s deer management success. There was a significant and substantive difference in support for the four-point regulation, with 70.1% support from the email survey and 55.5% from the mail survey.

Discussion:

When will it be appropriate to transition to different survey modes, like email, text, and app? These decisions may be driven by influencers such as the future of the postal service system, innovations in technology, decline in survey response, and public acceptability of unsolicited surveys. Will it be acceptable to systematically eliminate a portion of our sampling frame that may not have online access? Given that many survey methods are now experiencing low response rates and are becoming

more costly to conduct, and that no method may truly represent the population of interest, it may make economic (and practical) sense to use the most economical method(s) available, as long as the population may be effectively sampled.

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